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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,503	10/31/2000	David C. Cushing	2566-106	1384
6449	7590	11/16/2006	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C.			ALPERT, JAMES M	
1425 K STREET, N.W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20005			3693	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/699,503

Applicant(s)

CUSHING ET AL.

Examiner

James Alpert

Art Unit

3693

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/10/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The following communication is in response to Applicants' amendment filed on 10 August 2006.

Status of Claims

Claims 5,8,10-12,15-16, are original. Claims 1-3,6,9,13-14 are currently amended. Claims 4,7,18-21 are previously presented, while Claim 17 is canceled. There are no new claims, so therefore, Claims 1-16,18-21 are currently pending.

Response to Arguments

Applicants' arguments filed 10 August 2006 have been fully considered but they are not persuasive as discussed below. Therefore, Claims 1-16,18-21 remain rejected, and Applicants' request for allowance is respectfully declined.

Claim Rejections - 35 USC § 103

The text of 35 U.S.C. §103(a), which is not included in this action, can be found in a prior Office action. Claims 1-2,13-14,18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny, U.S. Patent #6594643 in view of Kane, U.S. Patent #6317728. Claims 3-8,15-16,21 are rejected under 103(a) as being unpatentable over Freeny in view of Kane, and further in view of PlexusGroup Commentary #59 (hereinafter "Plexus"). Claims 9-12 are rejected under 103(a) as being unpatentable over Freeny in view of Kane, and further in view of Horrigan et al, U.S. Patent #6493682.

With regard to Claims 1-2, Freeny teaches the method and system comprising:

providing a server connected to a communication network, said server being programmed with a specific trading strategy algorithm, (Col.1, lines 45-47, describing a "computer" with pre-determined trading criteria, a.k.a. an algorithm. Also see Col. 2, lines 4-6, describing the need for criteria or algorithms to deal with market changes, Col. 3, lines 23-44, specifically discussing an algorithm, and Col. 3, lines 41-44, specifically referring to commercially designed trading algorithms)

said server receiving a non-executable trade order for trading a number of shares of a particular security in a trade forum, and (Col. 2, lines 63-67, describing "investment data", such as number of shares, particular security, etc; Col. 3, lines 31-38, describing buying and selling of 100 shares of stock, indicating the ability to trade a "number" of shares; Col. 3, lines 50-54, describing the terminal receiving the data and the algorithm)

said server executing said specific trading strategy algorithm to generate one or more executable trade orders for carrying out said non-executable trade order, (Col. 3, lines 23-44)

said one or more executable trade orders being generated according to a trading strategy, (Col. 3, lines 54-59)

receiving at said server over said network a non-executable trade order for trading a number of shares of a particular security from a customer, (Col. 2, lines 63-67)

generating one or more executable trade orders for carrying out said non-executable trade order according to actions determined by said specific trading strategy algorithm, and (Col. 3, lines 23-44)

executing the one or more executable trade orders in a trade forum according to actions determined by said specific trading strategy algorithm. (Col. 4, lines 12-15)

Claims 18-19 recite:

18. The system as recited in claim 1, further comprising a central server coupled with said plurality of servers and with said plurality of clients, said central server configured to receive said non-executable trade orders and route said non-executable trade orders to said selected server based on said selected trading strategy.

19. The system as recited in claim 18, wherein said central server is programmed with a trading strategy algorithm corresponding to said selected trading strategy.

In looking at Claim 1 and Claims 18-19, it is fairly evident that Freeny does not expressly teach the limitations wherein there are multiple servers, each programmed with a specific trading algorithm. The examiner has reviewed the entirety of the disclosure, drawings, and claims in order to gain further insight into the choice of this particular architecture to implement Applicants' methods, and has discovered that there does not appear to be any particular reason, either obvious or latent, as to why the methods should be implemented on multiple servers, as opposed to simply using one server that receives programming instructions according to an algorithm selection. After careful consideration, the examiner is left to reason that "multiple servers" is simply a design choice. As it is, Applicants' own Figure #1 shows a single "super server" presumably to include multiple servers therein, yet indicating that a single processor is sufficient under some conditions. The issue then becomes whether there is any prior art, which suggest multiple algorithms, though perhaps implemented on a single computer/server. In an analogous application, Kane discloses this exact situation.

Kane does use slightly different language than the instant application to describe similar concepts. For example, the word "agent" is used to describe that which appears to be a module that implement "rules" which are similar to algorithms: sequence of rules to reach a determination. Thus, only need look at Claim 8 to discover a method similar to Applicants' wherein several agents implement different sets of rules to reach decision about making a buy/sell orders. Thus the idea of multiple algorithms is known in the art. To that end, it would have been obvious to one of ordinary skill in the art to combine the teachings of Freeny, related to an implemented algorithm on a server, with the

teachings of Kane, related to implementing multiple algorithms each processing an trade request to an individual set of rules, in order to teach Applicants' invention as claimed, whether the algorithms are implemented on multiple servers, or a single server with multiple modules, as a matter of choice of design. The motivation for such a combination is within the general knowledge available to one of ordinary skill in the art, and is simply to offer as many different configurations as are known, so as to achieve maximum speed in determining an appropriate strategy and subsequently processing trade orders.

Applicants' primary argument in response to these observations is that Freeny teaches only *criteria*, not algorithms. However, a closer look at Freeny reveals that the reference *specifically* addresses commercially viable algorithms. See Col. 3, lines 41-44. Applicant further argues that Freeny does not relate to "selected" trade strategies. In response, please note that the claims of the instant application do not expressly state how the strategies are selected, but just that they are. This breadth could certainly be applied to Freeny, but in addition, Freeny teacher user selection at Col. 2, lines 53-59 and Col. 3, lines 8-31 which describes receiving criteria through user inputs.

Claims 13-14 recite a method and system comprising:

providing a plurality of servers connected to said communication network and to each other over said network, such that said servers are capable of comparing their received requests with orders received by other servers of said plurality of servers, and are capable of carrying out trades with said other servers in accordance with the order information entered into each server.

As mentioned previously, Freeny does not expressly teach multiple servers such that orders among the multiple servers can possibly be matched (as described in Claims 13-14). However, in the system envisioned by as combination of Sweeny and Kane, each algorithm would have access to each other and trades could be easily matched. As such a combination of references discloses these claims as well.

With regards to Claims 3-8,15-16,21, the examiner has observed that these claims relate in one way or another to the implementation of the VWAP (Volume Weighted Adjusted Price) algorithm onto the server system of Claim 1. That is to say, these claims detail the exact steps undertaken in the particular algorithm. Claim 15 adds smoothing to the mix as well. Yet for all the detail, isn't VWAP very old and well known in the art? At the same time, aren't these steps simply a matter of programming design to achieve the goals of the VWAP? The initial examiner to the case cited the Plexus reference to establish this algorithm and in fact, this reference suggests VWAP has been established for quite some time. Thus, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to combine the teachings of Freeny, relating to implementation of an algorithm onto a server, with the teachings of Plexus, relating to the VWAP algorithm, such that the algorithm could be performed by the system in Freeny. The motivation for the combination is simple: to provide a proven algorithm for investing in an automated format. This motivation (and others) is actually suggested in Freeny at (Col. 1, line 62 – Col. 2, line 15).

With regard to Claims 9-12, the examiner has observed that these claims relate in one way or another to the implementation of the SPI (Short-term Price Improvement)

algorithm onto the server system of Claim 1. That is to say, these claims detail the exact steps undertaken in the particular algorithm. While the acronym "SPI" is not well known, and is part of the marketing by the assignee of the instant application, the idea itself of regulating the flow or orders in a short time period is very old and well known in the art. For example, one patent dealing with this subject matter is Horrigan. Horrigan provides the method for,

"determining whether to execute an order (or list of orders) immediately, or delay execution in exchange for possible price savings." (Col. 3, lines 27-29).

And further describes the case where,

"... the investor plans to trade the security within a specified trading window as well as the case in which trading occurs only at attractive prices." (Col. 3, lines 36-38).

Horrigan goes on to describe how the decisions are based on risk aversion, variance, and other factors, which are elements in Applicant's SPI algorithm focusing on aggressiveness of the investor and necessity of immediacy in the market. Thus from the examiner viewpoint, the actual SPI algorithm is simply an obvious modification to the existing means for conducting trading programmatically. Considering that Freeny has established a system and method for implementing generating and executing trade orders according to algorithms expected of a use, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to modify the teachings of Freeny, relating to implementation of an algorithm onto a server, to include an algorithm similar to those described by the SPI algorithm as described by applicant or the algorithm described by Horrigan, both dealing in shortened time-frame trading.

The motivation for the combination is simple: to provide a proven algorithm for investing in an automated format. This motivation (and others) is actually suggested in Freeny at (Col. 1, line 62 – Col. 2, line 15).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

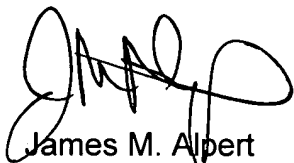
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Alpert whose telephone number is (571) 272-6738. The examiner can normally be reached on M-F 9:00-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on (571) 272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

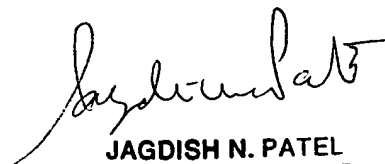
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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Respectfully,



James M. Albert
October 30, 2006



JAGDISH N. PATEL
PRIMARY EXAMINER